

Notice of Allowability

Application No.

10/799,988

Examiner

Patrick A. Darno

Applicant(s)

TAGUCHI ET AL.

Art Unit

2163

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 01/25/2007.
2. ☒ The allowed claim(s) is/are 1,3-6,8,9,12,13,15-18 and 24-27.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).


* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☒ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


DON WONG
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

DETAILED ACTION

1. Claims 1, 3-6, 8-9, 12-13, 15-18, and 24-27 are allowed over the prior art of record.
2. An Examiner's Amendment to the record appears below. Should the changes and/or additions be unacceptable to Applicant, an amendment may be filed as provided by 37 C.F.R. 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the Issue Fee.

EXAMINER'S AMENDMENT

Claim 1: (Currently Amended) A storage access method in [[In]] a network data processing system comprising one or more host servers, a switching component, and a data storage component, [[a]] the storage access method comprising:

receiving a user-originated request for data storage, the request including a service policy, the service policy comprising a server sub-policy, a network sub-policy, and a storage sub-policy which is associated with one or more data storage performance criteria;

identifying a server service component based on the server sub-policy;

identifying a data store from among a pool of data stores defined in the data storage component, wherein the identifying of the data store from among the pool of data stores includes selecting a data store having performance characteristics that meet or exceed the one or more performance criteria associated with the storage sub-policy;

identifying a port on the data store by applying a rule to the one or more data storage performance criteria, wherein the rule characterizes each port of a set of at least

Art Unit: 2163

one port on the data store with a bandwidth metric, the bandwidth metric for each port being determined from a port priority and a total bandwidth of each port;

communicating with a data storage agent to establish a data path within the data storage component for data communication between the port and the data store, the data storage agent being one of a plurality of data storage agents that manage portions of the data storage component;

based on the network sub-policy, identifying a network path for data communication between the server service component and the port, wherein the network sub-policy includes one or more network path criteria for selecting a network path from a set of one or more network paths based upon one or more network attributes; and

communicating with a network agent to allocate the network path identified based upon the network sub-policy, the network agent being one of a plurality of network agents that manage portions of the network storage component.

Claim 2: (Canceled)

Claim 3: (Currently Amended) The method of claim [[2]] 1 wherein the network path has a bandwidth metric that is greater than or equal to the bandwidth metric of the port.

Claim 6: (Currently Amended) A storage service manager comprising a processing component and a memory component storing computer program code for execution by the processing component, the program code configured to operate the processing component to perform method steps of:

receiving a user-originated request for data storage, the request including a service policy, the service policy comprising a server sub-policy, a network sub-policy, and a

Art Unit: 2163

storage sub-policy which is associated with one or more data storage performance criteria;

executing a rule to identify a suitable data store from among a pool of data stores defined in a data storage component, wherein the identifying of the data store from among the pool of data stores includes selecting a data store having performance characteristics that meet or exceed the one or more performance criteria associated with the storage sub-policy, the rule further comprising an evaluation of the one or more data storage performance criteria, including identifying a port based on the rule, wherein the rule characterizes each port of a set of at least one port on the data store with a bandwidth metric, the bandwidth metric for each port being determined from a port priority and a total bandwidth of each port;

communicating with a data storage agent to establish a data path within the data storage component for data communication between the port and the data store, the data storage agent being one of a plurality of data storage agents that manage portions of the data storage component;

based on the network sub-policy, identifying a network path for data communication between the server service component and the port, wherein the network sub-policy includes one or more network path criteria for selecting a network path from a set of one or more network paths based upon one or more network attributes; and

communicating with a network agent to allocate the network path identified based upon the network sub-policy, the network agent being one of a plurality of network agents that manage portions of a network storage component.

Claim 7: (Canceled)

Art Unit: 2163

Claim 8: (Currently Amended) The storage service manager of claim [[7]] 6 wherein the network path is characterized by a bandwidth metric that is greater than or equal to the bandwidth metric of the port.

Claim 9: (Currently Amended) A storage access method in [[In]] a networked data processing system comprising one or more host servers, a switching component, and a data storage component, [[a]] the storage access method comprising:

receiving a user-originated request for data storage, the request including a service policy, the service policy comprising a server sub-policy, a network sub-policy which is associated with one or more security criteria, and a storage sub-policy which is associated with one or more data storage performance criteria;

identifying a server service component based on the server sub-policy;

identifying a data store from among a pool of data stores defined in the data storage component based on a first rule comprising an evaluation of the one or more data storage performance criteria, wherein the first rule selects a data store having performance characteristics that meet or exceed the one or more performance criteria associated with the storage sub-policy;

communicating with a data storage agent to establish a data path within the data storage component for data communication between the data store and a port on the data store, the data storage agent being one of a plurality of data storage agents that manage portions of the data storage component, wherein the data storage agent identifies a port on the data store by applying a rule to the one or more data storage performance criteria, wherein the rule characterizes each port of a set of at least one port on the data store with

Art Unit: 2163

a bandwidth metric, the bandwidth metric for each port being determined from a port priority and a total bandwidth of each port;

identifying a network path for data communication between the server service component and the port, based on an evaluation of ~~the one~~ the one or more security criteria in the network sub-policy, wherein the network sub-policy includes one or more network path criteria for selecting a network path from a set of one or more network paths based upon one or more network attributes; and

communicating with a network agent to allocate the network path identified based upon the network sub-policy, the network agent being one of a plurality of network agents that manage portions of the network storage component.

Claim 10: (Canceled)

Claim 11: (Canceled)

Claim 13: (Currently Amended) Computer program code stored in a memory component in ~~[[In]]~~ a network data processing system comprising one or more host servers, a switching component, and a data storage component, a storage service manager comprising a processing component ~~and computer program code for execution by the processing component~~, the computer program code for execution by the processing component, the computer program code configured to operate the processing component to perform method steps of:

receiving a user-originated request for data storage, the request including a service policy, the service policy comprising a server sub-policy, a network sub-policy which is associated with one or more security criteria, and a storage sub-policy which is associated with one or more data storage performance criteria;

Art Unit: 2163

identifying a server service component based on the server sub-policy;

identifying a data store from among a pool of data stores defined in the data storage component based on a first rule comprising an evaluation of the one or more data storage performance criteria, wherein the first rule selects a data store having performance characteristics that meet or exceed the one or more performance criteria associated with the storage sub-policy;

communicating with a data storage agent to establish a data path within the data storage component for data communication between the data store and a port on the data store, the data storage agent being one of a plurality of data storage agents that manage portions of the data storage component, wherein the data storage agent identifies a port on the data store by applying a rule to the one or more data storage performance criteria, wherein the rule characterizes each port of a set of at least one port on the data store with a bandwidth metric, the bandwidth metric for each port being determined from a port priority and a total bandwidth of each port;

identifying a network path for data communication between the server service component and the port, based on an evaluation of ~~the one~~ the one or more security criteria in the network sub-policy, wherein the network sub-policy includes one or more network path criteria for selecting a network path from a set of one or more network paths based upon one or more network attributes; and

communicating with a network agent to allocate the network path identified based upon the network sub-policy, the network agent being one of a plurality of network agents that manage portions of the network storage component.

Claim 14: (Canceled)

Art Unit: 2163

Claim 15: (Currently Amended) The computer program of claim [[14]] 13 wherein the at the least one security parameter includes one of a port zoning parameter and a WWN (world-wide name) zoning parameter.

Claim 19: (Canceled)

Claim 20: (Canceled)

Claim 21: (Canceled)

Claim 22: (Canceled)

Claim 23: (Canceled)

Claim 24: (Currently Amended) Computer program code stored in a memory component in [[In]] a network data processing system comprising one or more host servers, a switching component, and a data storage component, the computer program code configured to operate a processor to perform steps of:

receiving a user-originated request for data storage, the request comprising a service policy, the service policy comprising a server sub-policy, a network sub-policy, and a storage sub-policy, wherein the service policy is being associated with one or more security criteria;

identifying a server service component based on the server sub-policy;

identifying a data store from among a pool of data stores managed by the data storage component, wherein the identifying of the data store from among the pool of data stores includes selecting a data store having performance characteristics that meet or exceed the one or more performance criteria associated with the storage sub-policy;

identifying a port on the data store by applying a rule to one or more data storage performance criteria, wherein the computer program code characterizes each port of a set

Art Unit: 2163

of at least one port on the data store with a bandwidth metric, the bandwidth metric for each port being determined from a port priority and a total bandwidth of each port;

communicating with one or more data agents to set up the data store and the port;

identifying a network path between the server service component and the port,

based on an evaluation of the one or more security criteria in the network sub-policy,

wherein the network sub-policy includes one or more network path criteria for selecting a

network path from a set of one or more network paths based upon one or more network attributes; and

communicating with one or more network agents to configure the switching component to set up the network path identified based upon the network sub-policy,

wherein one or more of the steps of identifying include determining a security parameter from the one or more security criteria and performing the identifying step using the security parameter.

Allowable Subject Matter

3. The following is an Examiner's statement of reasons for allowance: The prior art of record fails to teach and or suggest "identifying a port on the data store by applying a rule to the one or more data storage performance criteria, wherein the rule characterizes each port of a set of at least one port on the data store with a bandwidth metric, the bandwidth metric for each port being determined from a port priority and a total bandwidth of each port." The preceding limitations, when combined with the rest of the limitations recited in claim 1, result in a combination of elements that is both novel and unobvious over the prior art of record.

Art Unit: 2163

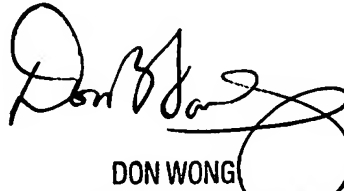
4. Any comments considered necessary by Applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick A. Darno whose telephone number is (571) 272-0788. The examiner can normally be reached on Monday - Friday, 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


DON WONG
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

Patrick A. Darno
Examiner
Art Unit 2163

